IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.

Not Assigned

Applicant

Keith D. Beaty

Filed

November 5, 2003

Title

Implant Surface Preparation

TC/A.U.

Not Assigned

Examiner

Not Assigned

Docket No.

47168-00033USC3

Customer No.

30223

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §§1.97 and 1.98

CERTIFICATE OF MAILING 37 C.F.R. 1.8

37 C.F.R. 1.8

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail in an envelope addressed to: MS DD, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below:

Data

Signature O

Dear Commissioner:

In compliance with the duty of disclosure under 37 C.F.R. §1.56, it is respectfully requested that this Information Disclosure Statement be entered, and the references listed on enclosed Form PTO-1449 be considered by the Examiner and made of record. In accordance with 37 C.F.R. § 1.98(d), copies of the listed references are not enclosed, as they were previously supplied by the Applicants, or cited by the Examiner previously in the parent applications.

This application is a continuation of U.S. Application No. 09/777,335 filed February 26, 2001; which is a continuation of U.S. Patent Application No. 09/259,432 filed March 1, 1999 (to issue as U.S. Pat. No. 6,491,723), which was a continuation of U.S. Patent Application No. 08/607,903, filed February 27, 1996 (to issue as U.S. Pat. No. 5,876,453), which was filed as PCT/US95/15576, filed on November 30, 1995, which is a continuation-in-part of pending U.S.

patent application Serial No. 08/351,214, filed November 30, 1994, (now abandoned) for "Implant Surface Preparation."

In accordance with 37 C.F.R. §§ 1.97(g),(h), this Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed to be an admission that the information disclosed is, or is considered to be, prior art with respect to the present application or material to patentability as defined in 37 C.F.R. §§ 1.56.

The present Information Disclosure statement is being filed with the patent application and hence is believed to be timely in accordance with 37 C.F.R. § 1.97(b). Accordingly, no fees are believed to be due in connection with the filing of this Information Disclosure Statement. However, should any fees be deemed necessary (except payment of the issue fee), the Commissioner is authorized to charge any deficiency or to credit any overpayment to Jenkens & Gilchrist Account No. 10-0447/47168-00033USC3.

Respectfully submitted,

November 5, 2003

Date

Mark R. Anderson

Reg. No. 54,656

Jenkens & Gilchrist, P.C.

Mark and

225 West Washington Street, Suite 2600

Chicago, IL 60606-3418

(312) 425-3900

Form PTO-1449 (modified)	Atty. Docket No. Serial No.			
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List of Patents and Publications for Applicant's	Applicant			
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	A02	3,605,123	09/20/1971	Hahn	3	1					
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	A04	3,790,507	02/1974	Hodosh	433	173					
	A05	3,855,638	12/24/1974	Pilliar	3	1					
·	A06	3,919,723	11/18/1975	Heimke et al.	3	1.9					
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	A25	4,702,930	10/27/1987	Heide et al.	427	2					
	A26	4,704,126	11/03/1987	Baswell et al.	623	10					

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	A28	4,818,559	04/04/1989	Hama, et al	427	2	
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	A30	4,865,603	9/1989	Noiles	623	18	
	A31	4,871,578	10/03/1989	Adam et al.	427	2	100
	A32	4,874,434	10/17/1989	Riggs, Jr.	134	3	
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	A36	4,944,754	07/31/1990	Linkow, et al	623	16	
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	B02	926,552	05/22/1973	Canada	3	1	N/A					
	B03	EP 202031 A2	11/20/1986	European	A 61 F	2/04	N/A					
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	B07	EP 455929 A1	01/02/1991	European	A 61 F	2/42	Abs.					
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	B09	2 289 160	10/30/1974	France	A 61 F	1/00	Abstract					
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·	C01	A histomorphometric and removal torque study of screw-shaped titanium implants with three different surface topographies (Ref. D33)
	C02	Adhesion of Bone to Titanium (Ref. 27)
	C03	Albrektsson, T., P.I. Branemark, H.A. Hansson & J. Lindstrom, "Osseointegrated Titanium Implants," 1991.
	C04	An animal study of c.p. titanium screws with different surface topographies (Ref. D 32)
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	C06	Baier, R. E., et al., "Surface Energetics And Biological Adhesion," International Symposium on Physicochemical Aspects of Polymer Surfaces, Volume 2, pp. 895-909
	C07	Baier, R.E; A.E. Meyer "Implant Surface Preparation," International Journal of Oral & Maxillofacial Implants, Vol. 3, 9-20, 1988.
	C08	Binon, P. "Evaluation of Machining Accuracy and Consistency of Selected Implants, Standard Abutments, and Laboratory Analogs," The International Journal of Prosthodontics, Vol. 8, 162-178, 1995.
	C09	Bio Materials 1996 Vol. 17, No. 6 pp. 605-616 "Bone response to surface-modified titanium implants: studies on the early tissue response to machined and electropolished implants with different oxide thicknesses", Larsson et al.
	C10	Bio Materials 1994 Vol. 15, No. 13, pp. 1062-1074 "Bone response to surface modified titanium implants: studies on electropolished implants with different oxide thicknesses and morphology", Larsson et al.
	C11	Buser et al., "Interface Shear Strength of Titanium Implants With a Sandblasted and Acid-Etched Surface: A Biomechanical Study in the Maxilla of Miniature Pigs," <i>J Biomed Mater Res</i> , 45 (1999), pgs. 75-83.
	C12	Boyan et al., "Titanium Surface Roughness Alters Responsiveness of MG63 Osteoblast-Like Cells to 1α,25-(OH) ₂ D ₃ ," <i>J Miomed Mater Res</i> , 39 (1998), pgs. 77-85.
	C13	Bowers, K.; Keller, J.; Randolph, B.; Wick, D.; Michaels, C. "Optimization of Surface Micromorphology for Enhanced Osteoblast Responses In Vitro" International Journal of Oral & Maxillofacial Implants. Vol. 7 No. 3, Pages 302-310, 1992.
	C14	Branemark, P.I.; et al, Osseointegrated implants in the Treatment of the Edentulous Jaw Experience from a 10-year period, Stockholm, Almqvist & Wiksell International, 1977.
	C15	Per-Ingvar Branemark, M.D., Ph.D., "Tissue-Integrated Prostheses" (Ref. 43)

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	C16	Buser, D., et al., "Influence Of Surface Characteristics On Bone Integration Of Titanium Implants, A Histomorphometric Study In Miniature Pigs," Journal of Biomedical Materials Research, Volume 25, pp. 889-902 (1991).	
	C17	Daniel Buser, DDS, et al., "Removal Torque Values of Titanium Implants in the Maxilla of Miniature Pigs", pp. 611-619	
	C18	Carlsson L.; T. Rostlund; B. Albrektsson; T. Albrektsson "Removal Torques for Polished and Rough Titanium Implants," International Journal of Oral & Maxillofacial Implants, Vol. 3, 21-24, 1988.	
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	C21	Cook, S.; F. Georgette; H. Skinner; R. Haddad, Jr. "Fatigue properties of carbon- and porous-coated Ti-6A1-4V alloy," Journal of Biomedical Materials Research, Vol. 18, 497-512, 1984.	
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	C23	Curtis, A. S. G., et al., "The Effects Of Topographic And Mechanical Properties Of Materials On Cell Behavior," Critical Reviews in Biocompatibility, Volume 5, Issue 4, pp. 343-362 (1990)	
	C24	Das Prinzip der neuen Ledermann-Schraube (German Reference D3)	
	C25	de Groot, K., et al., "Plasma Sprayed Coatings Of Hydroxylapatite," Journal of Biomedical Materials Research, Volume 21, pp. 1375-1381 (1987)	
	C26	C. de Putter et al., Implant Materials in Biofunction, "Removal Forces For Osseointegrated Titanium Implants" (Ref. 31)	
	C27	Declaration of Prabhu Gubbi presenting information on the surfaces of 61 implants (November 2, 2001)	
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	C30	Eberhardt, A., et al., "Effects Of Precoating Surface Treatments On Fatigue Of Ti-6A1-4V," Journal of Applied Biomaterials, Volume 6, pp. 171-174 (1995)	
	C31	Effect of a Blycoprotein Monomolecular Layer on the Integration of Titanium Implants in Bone (Ref. D48)	

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	C31	Effect of a Blycoprotein Monomolecular Layer on the Integration of Titanium Implants in Bone (Ref. D48)	
	C30	Eberhardt, A., et al., "Effects Of Precoating Surface Treatments On Fatigue Of Ti-6A1-4V," Journa of Applied Biomaterials, Volume 6, pp. 171-174 (1995)	
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	C33	Gotfredsen, K., et al., "Histomorphometric And Removal Torque Analysis for TiO ₂ -Blasted Titanium Implants" Clinical Oral Impl. Res., February 6, 1992, pp. 77-84.	
	C34	edited by G. Heimke, U.Soltesz and A.J.C. Lee, "The Influence of Various Titanium Surfaces on the Interface Shear Strength Between Implants and Bone," <u>Clinical Implant Materials</u> , Advances in Biomaterials, Vol. 9, 1990 pgs. 309-314.	
	C35	Patrick J. Henry, B.D.Sc., M.S.D., F.R.A.C.D.S., "Comparative Surface Analysis of Two Osseointegrated Implant Systems" (Ref. D19)	
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	C38	Journal of Materials Science Materials In Medicine (1997), pp. 721-729 "Bone response to surface modified titanium implants - studies on the tissue response after 1 year to machined and electropolished implants with different oxide thicknesses"	
	C39	Karagianes, M. T., D.V.M., "Porous Metals As A Hard Tissue Substitute," Biomat. Med. Dev., Art. Org., Volume 1, No. 1, pp. 171-181 (1973)	
	C40	Kasemo, B., et al., "Metal Selection And Surface Characteristics," Tissue-Integrated Prostheses Osseointegration In Clinical Dentistry (Quintessence Books), pp. 99-116 (1985)	
	C41	Kiesweiter et al., "Surface Roughness Modulates the Local Production of Growth Factors and Cytokines by Osteoblast-Like MG-63 Cells," <i>Journal of Biomedical Materials Research</i> , Vol. 32, (1996), pgs. 55-63.	
	C42	Klokkevold, P., et al., "Evaluation Of A New Chemically Enhanced Implant Surface By Torque Removal Tests In The Rabbit Femur," Clinical Oral Implants Research (1997)	
	C43	Lazzara, R., et al., "Retrospective Multicenter Analysis Of 31 Endosseous Dental Implants Placed Over A Five Year Period," Clinical Oral Implants Research, Volume 7, pp. 73-83 (1996)	
	C44	Philippe D. Ledermann, Dr. med. dent., "Die Quintessenz" (Ref. 26)	
	C45	Ledermann et al., The Ha-TI Implant, Schweiz Monatsschr Zahnmed, Vol. 101:5/1991 (7 pages)	
·	C46	Philippe D. Ledermann, Dr. med. dent. "Heute so zuverlässig wie vor 50 Jahren" German (Ref. D4)	
	C47	Philippe D. Ledermann, Dr. med. dent., "Swiss Dent" (Ref. D25)	

EXA	MINER:	DATE CONSIDERED:
	C47	Philippe D. Ledermann, Dr. med. dent., "Swiss Dent" (Ref. D25)
	C46	Philippe D. Ledermann, Dr. med. dent. "Heute so zuverlässig wie vor 50 Jahren" German (Ref. D4)

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	C48	Dana C. Mears, B.M., B.Ch., Ph.D., M.R.C.P., F.R.C.S. (C), "Materials and Orthopaedic Surgery" (Ref. 42)	
	C49	Messersmith, P., et al., "Stress Enhancement And Fatigue Susceptibility Of Porous Coated Ti-6A1-4V Implants: An Elastic Analysis," Journal of Biomedical Materials Research, Volume 24, pp. 591-604 (1990)	
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	C51	W. M. Murphy, "Tissue Reaction of Rats and Guinea-Pigs to Co-Cr Implants With Different Surface Finishes" (Ref. D8)	
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	C69	Schulte, J., "External Hex Manufacturing Tolerances Of Six Implant Systems: A Pilot Study," Implant Dentistry, pp. 51-53 (Spring 1994)
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List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT	Applicant Keith D. Beaty	
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Page 9 of 10	Filing Date: 11/05/2003	Group: Not Assigned

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	C85	Tarnow, Dennis P., DDS, "Dental Implants In Periodontal Care," Current Science, 1993, pp. 157-162
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	C85	Tarnow, Dennis P., DDS, "Dental Implants In Periodontal Care," Current Science, 1993, pp. 157-162
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	C87	"The Influence Of Implant Surface On Hard- And Soft Tissue Integration," Friatec website, 11 pages (written after June 6, 1998)
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